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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,073

10/21/2003

Tokihiro Shimura

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03/27/2007

INTELLECTUAL PROPERTY / TECHNOLOGY LAW

PO BOX 14329

RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/690,073

Applicant(s)

SHIMURA, TOKIHIRO

Examiner

Michael A. Marcheschi

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 12-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The finality of the last office action is withdrawn in view of the new art rejections below.

In view of this, this action is non final.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 23-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the proviso “when the powder contains titanium in the absence boron and aluminum, the powder further contains silicon in an amount of **0.8 wt.%**” (see table 1, comparison example 5) does not reasonably provide enablement for the proviso as defined in the independent claims (i.e. when the powder contains titanium in the absence boron and aluminum, the powder further contains silicon in an amount of **at least 0.8 wt.%**). The specification does not enable any person skilled in the art to which it pertains, or with which it is

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most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Although the specification in the table implies a proviso, the only example meeting a powder that contains titanium in the absence of boron and aluminum is comparison 5, and in this comparison, the amount of silicon is 0.8% (specific value), thus the specification only enables the claimed proviso with 0.8 wt% silicon and not **at least** 0.8 wt%, as claimed. In addition, the amount of silicon defined in the tables range from 0.7-1.4%, thus the amount of “at least 0.8 wt.%”, as claimed, is not enabled by the specification. Such a limited disclosure does not support the breadth of the instant claims since “at least” 0.8 wt% encompasses any and all values above 0.8 wt.% which is not clearly disclosed in the specification.

For the purpose of the instant art rejection, the examiner interprets “composed of” to mean “consisting essentially of”

Claims 1-8 and 23-24 are rejected under 35 U.S.C. 102(b) as anticipated by Benjamin (486).

Benjamin teaches in the column 10, line 56-column 11, line 8 and column 13, lines 14-37, a material (powder) comprises stainless steel powder (can have a 10 micron average particle size and a maximum size of 20 microns) based on iron having a chromium content of 4-30% (claimed amount), up to 2% aluminum, up to 2% titanium and up to 5% silicon.

With respect to the abrasive limitation, applicants are claiming a “material” which the intended use does not carry any weight to the composition (see **In re Thuau 57 USPQ 324**

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(CCPA 1942). Any material possesses a property such that it may be used for a purpose. In addition, irrespective of what the material is called, the composition and is the same, thus no distinction is seen to exist. The primary reference teaches a stainless steel powder having the claimed amount of chromium (powder used according to instant claim 6) and although all of the claimed characteristics of specific gravity and hardness are not literally defined, these characteristics are inherent because the material is the same (stainless steel with the claimed amount of chromium) and the same material is expected to yield the same results (i.e. claimed characteristics) in the absence of any evidence showing the contrary. With respect to the size values, the reference defines these characteristics. With respect to claims 23-24, applicants use process limitation to define the product (claim 24 defines an abrasive manufactured by...) and as is well known "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. In view of this, the material of claims 1-8 and 23-24 are anticipated by the reference. With respect to the claimed proviso, this does not have to be met.

Claims 1-8 and 23-24 are rejected under 35 U.S.C. 103(a) as obvious over JP-55-148701 (cited on 7/10/06 IDS) in view of Achikita et al.

The JP reference teaches in the abstract, a material (powder) comprises stainless steel powder based on iron having a chromium content of 10-25% (claimed amount), 0.05-2% boron and less than 1.5% silicon. The powder is used as a blast powder (i.e. blasting material-abrasive).

Achikita et al. teaches in column 4, lines 34-35 that powders generally have the claimed

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size.

With respect to the abrasive limitation, the JP reference states that the powder is a blast powder and this is an abrasive. In the alternative, applicants are claiming a "material" which the intended use does not carry any weight to the composition (see *In re Thuau* 57 USPQ 324 (CCPA 1942). Any material possesses a property such that it may be used for a purpose. In addition, irrespective of what the material is called, the composition and is the same, thus no distinction is seen to exist. The primary reference teaches a stainless steel powder having the claimed amount of chromium (powder used according to instant claims 6-7) and although all of the claimed characteristics are not literally defined, these characteristics are expected and therefore obvious because the material is the same (stainless steel with the claimed amount of chromium) and the same material is expected to yield the same results (i.e. claimed characteristics) in the absence of any evidence showing the contrary. With respect to the size, the reference defines this as powder and the broad interpretation of a powder encompasses sizes within the claimed range because the claimed sizes are known powder sizes, as shown by the secondary reference. With respect to claims 23-24, applicants use process limitation to define the product (claim 24 defines an abrasive manufactured by...) and as is well known "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964. In view of this, the material of claims 1-8 and 23-24 are met. With respect to the claimed proviso, this does not have to be met.

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Claims 9-11 are rejected under 35 U.S.C. 103(a) as obvious over JP-55-148701 (cited on 7/10/06 IDS) in view of Achikita et al. as applied to claim 1 above and further in view of JP 2002-256255, JP 2001-009727 and Kydd.

JP 2001-009727 teaches in sections [0032]-[0034], that surface treating an inorganic powder (i.e. abrasive (stainless steel is an inorganic powder and thus an abrasive)) with the claimed material in an amount of 0.01-5% improves the performance of the abrasive.

JP 2002-256255 teaches in sections [0013]-[0015] that surface treating an abrasive (stainless steel) with the claimed material in an amount of 0.01-5% improves the performance of the abrasive.

Kydd teaches in column 8, line 66-column 9, line 6 that it is well known to surface treat metal particles with stearic acid (claimed substance) in order to prevent agglomeration (reason for using this material according to the instant specification on page 11, line 12).

It is the examiners position that it would have been obvious to surface treat the stainless steel particles according to JP-55-148701 in view of Achikita et al. in order to optimize the performance of the abrasive by providing fluidity and preventing agglomeration, as shown by any one of (1) JP 2002-256255, (2) JP 2001-009727 and (3) Kydd. The agglomeration of blasting media is unwanted in order to eliminate the possibility of any larger particles being introduced during the blasting process which will result in producing much less than optimal results (i.e. surface scratching due to the larger particles). In view of this, any known way to prevent agglomeration and optimize the abrasive performance is clearly obvious to the skilled artisan.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as obvious over Benjamin (486) in view of JP-55-148701 and further in view of JP 2002-256255, JP 2001-009727 and Kydd.

Benjamin teach the claimed stainless steel powder, as is defined in the first prior art rejection. The use of this powder as a blast powder is obvious to the skilled artisan motivated by the fact that JP-55-148701 teaches that stainless steel powders are known to be used for this purpose. With this being obvious, it is the examiners position that it would have been obvious to surface treat the stainless steel particles according to Benjamin in order to optimize the performance of the abrasive by providing fluidity and preventing agglomeration, as shown by any one of (1) JP 2002-256255, (2) JP 2001-009727 and (3) Kydd. The agglomeration of blasting media is unwanted in order to eliminate the possibility of any larger particles being introduced during the blasting process which will result in producing much less than optimal results (i.e. surface scratching due to the larger particles). In view of this, any known way to prevent agglomeration and optimize the abrasive performance is clearly obvious to the skilled artisan.

Applicant's arguments filed 3/7/07 have been fully considered but they are not persuasive.

Applicants arguments about the scope of enablement are acknowledged, however, they are not convincing because no where in specification, as originally filed, supports a silica range above 0.8 when titanium is present and devoid of boron or aluminum. Applicant admits that the upper limit of the silica content defined in the specification is 1.4, thus this admission supports the examiners scope of enablement that the specification clearly does not support any and all

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values commensurate in scope with the claimed limitation of “at least 0.8” (open ended means that values well above 0.8 (i.e. 30, etc. are possible). Applicant states that the examiners conclusion is devoid of reasoning. The examiner has clearly defined reasoning in that the specification does not enable any and all values of silica above 0.8 when titanium is present. Applicant also argues that the examiner has ignored the level of ordinary skill. This argument is not persuasive because applicants show no evidence that the level of ordinary skill would reasonably determine that the scope of the silica content can be any and all vales above 0.8 when titanium is present. According to MPEP 2164.08, the scope of enablement must only bear a “reasonable correlation” to the scope of the claims and applicants do not show that the claimed limitation of “at least 0.8” is a reasonable correlation, especially since the specification only defines limited values for the silica content. In addition, as concerns the breadth of a claim relevant to enablement, the only relevant concern should be whether the scope of enablement provided to one skilled in the art by the disclosure is **commensurate with the scope** of protection sought by the claims. When a range is claimed, there must be reasonable enablement of the scope of the claim. Finally, applicants attention is directed to the section entitled “Range limitations” of MPEP 2163.05.

Applicant in section 13 of the latest declaration states that although the application discloses silica contents of 1.3 and 1.4, with such a reading, a person skilled in the art would have understood that the invention is not limited to abrasive compositions having exactly 0.8 weight percent silica. This is not persuasive because the specification is a guidance to tool for the skilled artisan to determine the metes and bounds of the protection sought and the specification only defines that the silica is present at 0.8 when titanium is used. The other

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contents of silica are defined for compositions devoid of titanium, thus the skilled artisan would have appreciated that these higher amounts of silica can only be used for compositions devoid of titanium and not for compositions that meet the claimed proviso.

The examiner respectfully requests applicant to show evidence as to why the open ended range of the claimed proviso is of knowledge to the skilled artisan and where clear support can be found in the specification as originally filed.

The arguments against the art rejections are moot in view of the new rejections above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/05
MM

Michael A Marcheschi
Primary Examiner
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